

**REMARKS:**

Claims 3-5, 7, 10, 12, 13, 15, and 18 are pending.

Claims 19 and 20 have been added. Support for new claim 19 is found in at least paragraphs [0006], [0009], [0017], and [0020]. Support for new claim 20 is found in at least paragraphs [0009], [0017], and in original claim 4. No new matter has been added.

Claims 3-5, 7, 10, 12, 13, 15, and 18 have been rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of :

(1) U.S. Patent No. 5,268,189 to Doerter (herein “Doerter”), in view of Peterson, M. E., G. A. Pelroy, F. T. Poysky, R. N. Paranjpye, F. M. Dong, G. M. Pigott and M. W. Eklund. “Heat-Pasteurization Process for Inactivation of Nonproteolytic Types of Clostridium botulinum in Picked Dungeness Crabmeat.” *Journal of Food Protection* 60(8) (1997): 928-934 (herein “Peterson”), U.S. Patent No. 2,546,428 to Byrd (herein “Byrd”), Air Liquide Canada, “Packaging and Preserving Fish and Sea Products” (Abstract Only) (herein “Air Liquide”), and U.S. Patent No. 4,840,805 to Sugisawa et al. (herein “Sugisawa”);

(2) U.S. Patent Pub. No. 2002/0061412 to Ueyama et al. (herein “Ueyama”), in view of Peterson, Air Liquide, and Sugisawa;

(3) GB 2,343,611 to Lett et al. (herein “Lett”), in view of Peterson, Air Liquide, Doerter, and Sugisawa; and

(4) U.S. Patent No. 3,852,486 to Walker et al. (herein “Walker”), in view of Ueyama, and Sugisawa.

**Claim Rejections under § 103**

A. Claims 3-5, 7, 10, 12, 13, 15, and 18 are rejected under 35 U.S.C. § 103(a) over Doerter in view of Peterson, Byrd, Air Liquide and Sugisawa.

While the Board of Patent Appeals and Interferences has affirmed this rejection, the prior arguments as noted by the Board were arguments of counsel without other evidence. Decision of Appeal, pg. 5, ll. 7-8. That is no longer the case, Applicant submits herewith a § 1.132

Declaration of John Keeler, Sr. (herein "Keeler Dec.").

Claims 10 and 18

Claims 10 and 18 are directed to a packaged crabmeat product and a method for packing crabmeat, respectively, where a volume of crabmeat to a volume of ambient air of about 13-20% is present in a sealed flexible pouch.

The Office conceded that Doerter, Peterson, Byrd, and Air Liquide are "silent as to the specific volume of ambient air in the package to obtain the ambient air to crabmeat ratio within the package to about 13-20%." Final Office Action at pg. 4, ll. 19-21. Thus, the rejections hinge on Sugisawa being combinable with these references.

Applicant submits that one of skill in the art would not combine the Doerter, Peterson, Byrd, Air Liquide, and Sugisawa references. In particular, one of ordinary skill in the art would not even apply Sugisawa's disclosure to crabmeat, let alone modify a flexible pouch containing crabmeat, taught by Peterson, to include a minimum amount of air as an ambient air to crabmeat ratio of 13-20% by volume as claimed, for the following reasons.

Sugisawa, on its face, expressly limits its teachings to sterilized, dried, broiled fish. Specifically, Sugisawa expressly states that "[t]he inventors of the present invention have *specifically limited* the food to broiled fish and have concentrated on a technique for increasing the preservative capability thereof by a heat sterilizing treatment." (Col. 1, ll. 14-19 (emphasis added)). Since Sugisawa is directed to a different field of endeavor from packaging and pasteurizing crabmeat — packaging of sterilized, dried, broiled fish — one of ordinary skill in the art would not even consider the teachings of Sugisawa. Keeler Dec., ¶¶ 9-13.

Secondly, crabmeat is not fish. See Keeler Dec., ¶ 14. Yet the Decision on Appeal appears to imply that shellfish, i.e., crabs, are "fish" with its statements that "Sugisawa teaches that the fish can be any kind of fish" and "crabs are shellfish." One of ordinary skill in the art knows that shellfish, like crabs, and fish are significantly different. In particular, crabs are crustaceans, i.e., *invertebrate* animals with hard exoskeletons and jointed legs and fish are aquatic *vertebrates* with fins. See Keeler Dec., ¶ 14. Crabs and fish typically live in different areas of the ocean, with crabs being bottom dwellers. At least these two difference contribute to

crabmeat having very different microbiological properties compared to fish. "Crabmeat typically carries a greater concentration and variety of bacterial flora than fish." Keeler Dec., ¶ 15. Thus, crabmeat tends to spoil easily and quicker than fish. *Id.*

Third, the texture of crabmeat and fish are so different that different preservative procedures are required. Crabmeat is expected to be soft, delicate in texture, have a sweet taste, and a natural color, which is best preserved by pasteurization. See Keeler Dec., ¶ 16-17. Fish is expected to be flakey and not watery. Sterilization, as taught in Sugisawa, best preserves these expected characteristics of fish. See Sugisawa, col. 3, ll. 35-43.

Therefore, Applicant respectfully submits that one of ordinary skill in the art would not consider Sugisawa's teachings for packaging crabmeat. Thus, one of ordinary skill in the art would not be inclined to modify a pasteurized flexible pouch of crabmeat as taught in Peterson based upon Sugisawa's teachings of sterilized, dried, broiled fish. See Keeler Dec., ¶ 17.

Nothing in Sugisawa or Air Liquide (based upon the full L'Air Liquide document "Preserving Fish and Sea Products" in the application file) would direct a person having ordinary skill in the art to intentionally leave a certain minimum quantity of air in the package. Sugisawa teaches

It is particularly preferable to conduct vacuum packaging so that the air content is 25% or less, preferably 15% or less, relative to total volume of air and the broiled fish in the container."

Col. 3, ll. 9-12. Mr. Keeler declares that "[w]hen read in context, this portion of Sugisawa instructs the reader to remove air from the package to improve 'the sterilization effect.' (Col. 3, l. 8.)." Keeler Dec., ¶ 18. Additionally, "[s]terilization is improved by vacuum packaging because vacuum packaging removes air [an insulator] from the package [which if present] slows the transfer of heat to the fish," which means it takes longer for the fish to reach the desired sterilization temperature. *Id.*, ¶ 19. Since the improvement in sterilization effect is directly related to the amount of air removed from the package, a person of ordinary skill in the art reading Sugisawa's teaching that sterilization is improved when the air content in the package "is 25% or less, preferably 15% or less" would be led to remove as much air from the package as possible. *Id.*, ¶¶ 19-20.

Air Liquide teaches vacuuming the air out of a package and then introducing a modified atmosphere of CO<sub>2</sub> and O<sub>2</sub>, not intentionally placing or leaving air in the package. Specifically, Air Liquide teaches packaging fresh fish and fresh sea products in a 60-80% carbon dioxide and 40-20% oxygen atmosphere without heat treatment to kill off bacteria and or bacteria spores. See full Air Liquide article, p. 23512. Since the package containing the fresh sea products is not heat-treated, i.e., not sterilized or pasteurized, there is no concern about the gases in the package expanding and causing package bloating and/or rupture or about the gases' interference with heat transfer discussed above. See Keeler Dec., ¶¶ 22-23. Therefore, a person of ordinary skill in the art would not even consider the teachings of Air Liquide for packaged crabmeat that is pasteurized, let alone be motivated to combine the Air Liquide's teachings of non-heated treated packages of fresh sea products with Sugisawa's teachings of sterilized, dried, broiled fish.

In the Decision on Appeal, the Board states that "L'Air Liquide would have indicated to one of ordinary skill in the art that Sugisawa's air provides the Appellant's recognized benefit of avoiding development of anaerobic spores." Applicant respectfully disagrees. While Air Liquide teaches having oxygen present to avoid development of anaerobic flora such as Clostridium botulinum, it teaches away from using air to that effect. Air Liquide teaches that an 80%-20% by volume CO<sub>2</sub>-O<sub>2</sub> modified atmosphere preserves fresh fish for 6 to 8 days at 2°C and 4 days at 8°C, but at the same temperatures with air the fish is only good for 3 days and 1 day, respectively. See Air Liquide, p. 23512, ¶¶ 5-6. Accordingly, Air Liquide teaches that packaging with air is not a good option because the meat is preserved for about 2-3 times less days. One of ordinary skill in the art reading the Air Liquide reference *as a whole* would not be led to believe that air having 21% oxygen and only 0.03% carbon dioxide would work as well as Air Liquide's modified atmosphere having 20% oxygen and 80% carbon dioxide. Instead, Air Liquide's poor test results would lead one of skill in the art away from using air in the package. Therefore, one of ordinary skill in the art would not consider combining the teachings of Air Liquide and Sugisawa.

For the reasons above, one skilled in the art would not combine the teachings of Sugisawa with a reference teaching crabmeat packaging, such as Peterson, or with Air Liquide. Therefore, the combination of Doerter in view of Peterson, Byrd, Air Liquide and Sugisawa must

fail. Applicant respectfully requests that the rejections of claims 10 and 18 and of all claims depending therefrom be withdrawn.

**B.** Claims 3-5, 7, 10, 12, 13, 15, and 18 are rejected under 35 U.S.C. § 103(a) over Ueyama in view of Peterson, Air Liquide and Sugisawa.

While the Board of Patent Appeals and Interferences has affirmed this rejection, the prior arguments as noted by the Board were arguments of counsel without other evidence. Decision of Appeal, pg. 5, ll. 7-8. That is no longer the case because Applicant submits herewith the Keeler Dec.

Claims 10 and 18

Claims 10 and 18 are directed to a packaged crabmeat product and a method for packing crabmeat, respectively, where a volume of crabmeat to a volume of ambient air of about 13-20% is present in a sealed flexible pouch.

The Office conceded that Peterson, and Air Liquide are "silent as to the specific volume of ambient air in the package to obtain the ambient air to crabmeat ratio within the package to about 13-20%." Final Office Action at pg. 4, ll. 19-21. The Office also conceded that Ueyama does not disclose an ambient air to crabmeat ratio of about 13 to 20 percent by volume. Final Office action, p. 8, ll. 4-5. Thus, the rejections hinge on Sugisawa being combinable with these references.

Ueyama is cited as teaching a heat shrinkable multi-layered film and packages made using this shrinkable film for packaging foods having projections (e.g., crabs), fish meat and other marine products. Ueyama, p. 5, ¶ [0066]. The shrinkable film shrinks when subjected to heat (e.g., hot water at 80 to 90°C), *Id.*, p. 3, ¶ [0033], which upon shrinking, if applied to packaged crabmeat during the pasteurization process, would render it difficult, if not impossible, to determine and achieve a desired ambient air to crabmeat ratio by volume. Ueyama is also cited as teaching packaging the desired product in a vessel, such as a bag or pouch, and placing a volume of the desired product in the vessel and forming a casing, sealing the bag or package, and heat-treating or sterilizing the vessel. Final Office Action, pp. 6-7.

However, none of these teachings remedy the lack of motivation to combine the

teachings of Sugisawa with a reference teaching the packaging of crabmeat, such as Peterson and now Ueyama, or the combination of Sugisawa and Air Liquide as discussed in detail in **Section A**.

For at least these reasons, one skilled in the art would not combine Ueyama in view of Peterson, Air Liquide, and Sugisawa. Therefore, Applicant respectfully requests that the rejections of claims 10 and 18 and of all claims depending therefrom be withdrawn.

C. Claims 3-5, 7, 10, 12, 13, 15, and 18 are rejected under 35 U.S.C. § 103(a) over Lett in view of Peterson, Air Liquide, Doerter, and Sugisawa.

While the Board of Patent Appeals and Interferences has affirmed this rejection, the prior arguments as noted by the Board were arguments of counsel without other evidence. Decision of Appeal, pg. 5, ll. 7-8. That is no longer the case because Applicant submits herewith the Keeler Dec.

Claims 10 and 18

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The Office conceded that Doerter, Peterson, and Air Liquide are "silent as to the specific volume of ambient air in the package to obtain the ambient air to crabmeat ratio within the package to about 13-20%." Final Office Action at pg. 4, ll. 19-21. The Office also conceded that Lett does not disclose an ambient air to crabmeat ratio of about 13 to 20 percent by volume, Final Office action, p. 11, ll. 27-30. Thus, the rejections hinge on Sugisawa being combinable with these references.

Lett is cited as disclosing a method for packaging crab including the steps of: (1) optionally wrapping the crab in parchment, (2) placing the crab in a pouch of plastic material, (3) adding brine to the pouch, (4) vacuum sealing and (5) pasteurizing the sealed pouch. Lett, p. 11. Lett teaches packing crab (whole crab) in a plastic pouch that has been filled with brine and has been vacuum-sealed to remove air. Therefore, Lett expressly teaches the removal of air from the package, thereby suggesting that air is detrimental to the final product. Lett fails to remedy the

lack of motivation to combine the teachings of Sugisawa with a reference teaching crabmeat packaging, such as Peterson and Lett, or the combination of Sugisawa and Air Liquide as discussed in detail above in **Section A**.

For at least these reasons, one skilled in the art would not combine Lett in view of Peterson, Air Liquide, Docter, and Sugisawa. Therefore, Applicant respectfully requests that the rejections of claims 10 and 18 and of all claims depending therefrom be withdrawn.

**D.** Claims 3-5, 7, 10, 12, 13, 15, and 18 are rejected under 35 U.S.C. § 103(a) over Walker in view of Ueyama and Sugisawa.

While the Board of Patent Appeals and Interferences has affirmed this rejection, the prior arguments as noted by the Board were arguments of counsel without other evidence. Decision of Appeal, pg. 5, ll. 7-8. That is no longer the case because Applicant submits the Keeler Dec.

Claims 10 and 18

Claims 10 and 18 are directed to a packaged crabmeat product and a method for packing crabmeat, respectively, where a volume of crabmeat to a volume of ambient air of about 13-20% is present in a sealed flexible pouch.

The Office conceded that Ueyama does not disclose an ambient air to crabmeat ratio of about 13 to 20 percent by volume. Final Office action, p. 8, ll. 4-5. The Office also conceded that Walker does not disclose an ambient air to crabmeat ratio of about 13 to 20 percent by volume. Final Office action, p. 9, ll. 23-24. Thus, the rejections hinge on Sugisawa being combinable with these references.

Ueyama and Walker are both cited as disclosing methods of packaging crabmeat. As discussed in **Section B**, Ueyama teaches packaging using shrinkable film that shrinks when subjected to heat (e.g., hot water at 80 to 90°C), *Id.*, p. 3, ¶ [0033], which if applied to packaged crabmeat would shrink during the pasteurization process and render it difficult, if not impossible, to determine and achieve a desired ambient air to crabmeat ratio. Walker is cited as disclosing a method for preserving shellfish, such as crab, by (1) partially cooking the crab to remove the meat, (2) dipping the cooked meat into a chlorine solution, (3) impregnating the cooked meat with an aqueous solution of an inorganic chloride (e.g., sodium chloride), an antibacterial agent

(e.g., sodium nitrate), and an organic acid (e.g., citric acid), (4) placing the impregnated meat into a container, (5) pasteurizing the impregnated meat and (6) sealing the container.

Ueyama and Walker both fail to remedy the lack of motivation to combine the teachings of Sugisawa with a reference teaching crabmeat packaging as discussed in detail in **Section A**. Additionally, neither reference remedies the lack of motivation to combine the teachings of Sugisawa and Air Liquide as discussed in detail in **Section A**.

For at least these reasons, one skilled in the art would not combine Walker in view of Ueyama and Sugisawa. Therefore, Applicant respectfully requests that the rejections of claims 10 and 18 and of all claims depending therefrom be withdrawn.

**CONCLUSION:**

For the foregoing reasons, it is submitted that the present application is in condition for allowance and formal notice thereof is respectfully requested.

The Commissioner is hereby authorized to treat any paper that is filed in this application, which requires an extension of time, as incorporating a request for such an extension. 37 C.F.R. § 1.136(a)(3). The Commissioner is further authorized to charge any fees required by this paper or to credit any overpayment to Deposit Account No. 20-0809.

Respectfully submitted,

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